ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of IMPROVING COMMISSION PROCESSES	)))	PP Docket No. 96-17

Comments of Motorola, Inc.

To: The Commission

Motorola, Inc., hereby submits its Comments in response to the Commission's *Notice of Inquiry* released February 14, 1996, _____FCC Rcd _____. This proceeding represents an important milestone in the Commission's campaign to improve the ways in which it serves the public. Motorola commends the Commission for this endeavor.

In these Comments, Motorola addresses ways in which the Commission can help bring new products to market faster by significantly streamlining the Office of Engineering and Technology's (OET) equipment approval program to achieve a 5 to 10 day turn around from filing to grant.[1] Our recommendations build upon efforts undertaken over the last few years by the OET staff.

I. SUMMARY

Simply stated, technology advances and competition have compressed product

[1] Motorola's satellite communication subsidiaries are also submitting separate comments on the International Bureau's licensing and rulemaking procedures.

development cycles to the point that the approval process is a significant factor in bringing products to market. We recommend the following steps to solve this problem:

1. Allow for shipment of most products upon application receipt by the Commission.
2. Fully implement a credit card payment method, with applications sent directly to the FCC's Lab instead of the Mellon Bank.
3. Minimize the information required for filings.
4. Eliminate the "technical review" for receivers and vastly streamline the review for transmitters.
5. Maintain a manufacturer's option to test in its own facilities.
6. Consider implementing electronic filing for further cycle time reductions.

The changes recommended in these Comments focus on ways to meet the Commission's statutory mandates of fostering the development of new technology while satisfying the agency's fundamental responsibilities for spectrum management.

II. THE CHANGING MARKETPLACE REQUIRES FASTER CYCLE TIME

Equipment authorizations (e.g. type acceptance, certification, and notification) serve the salutary purpose of assisting in sound spectrum management by helping the Commission to minimize interference. At the same time, the equipment authorization process is a major gate through which most wireless communications and computing equipment must pass in order to reach the market. As such, the process has a significant effect on the time within which new technology can be brought to market. With increasingly short product cycles,

the equipment authorization process also has major implications for trade and America's competitiveness in the world marketplace for telecommunications and information technology equipment.

The need to reduce the time it takes to obtain authorizations from the current 40 to 50 days to 5 to 10 days can best be appreciated by recognition of the changing global market for electronic equipment. In today's global economy competition for customers is more intense than ever before. America has fostered this competition and other developed nations have proven very willing to join in. Thus, American firms compete not only with each other but with major economic concerns from Asia and Europe. In other parts of the world, administrations recognize FCC grants of equipment authorization as *prima facie* evidence of fitness to market products. Accordingly, the efforts of the Commission to improve its equipment authorization program will reach far beyond this nation's borders and will affect both our national and the international economies.

Today, it is commonplace to see new models of electronic products introduced every four to six months as firms rush to compete. Companies that have not adapted to this change are now threatened by it. In fact, in today's electronics industry, shortening the time to market is a survival issue.

In the early 1990s, Motorola mounted a major effort to improve its time-to-market for new products. The efforts were customer driven. In the early 1980s, a given pager designs would have a commercial life in the marketplace of eight years. Today, that life is measured in months, not years. This speed in product introduction, however, has ushered in significant improvements in communications speed and functionality, which, in turn, have

had beneficial effects from the standpoint of obtaining greater throughput within a given amount of spectrum.

Within Motorola, the entire process of new product development continues to come under careful scrutiny. While many questions are asked, the key inquiry is "Does this step add value?". For example, the procurement of engineering parts for product development once required multiple signatures resulting in requisitions grinding their way through the paper mill for weeks with the attendant delay. In the new environment, the project manager exercises authority to order the parts needed for the process without the additional delay of review by multiple supervisors. As a result, parts needed for product design and development in the engineering model and prototype stage flow into the system unimpeded.

The forces driving new product development have also required Motorola to look at the steps performed by outside companies that provide critical support. In many cases, vendors effectively become partners in the product development effort thereby improving the overall process. For example, the designers of a mechanical part now work directly with the engineers from the ultimate supplier of the part in order to optimize the information exchange between Motorola as customer and the vendor as supplier. This direct communications results in both less time to create the new part and parts that better serve their function. Just like the case described above, the Commission processes are part of the development cycle for a new telecommunications product.

In the case of the equipment authorization program, the central issue of adding value should be translated as "Is this step essential in order to meet our statutory responsibilities?". If so, the follow on query should be, "Is there a more efficient way to do so?". In large part

this effort should search for ways to simplify the processes so as to minimize the potential for application errors that inadvertently reduce the cycle time from filing to grant. Motorola views this inquiry as a commendable effort in seeking answers to these key questions. As senior officials within the Office of Engineering and Technology have recognized, however, this effort must be an ongoing function within the bureau as it strives to provide better service to the public.

III. SPECIFIC RECOMMENDATIONS

In keeping with the ongoing need to review each step in the process, Motorola urges the Commission to move forward with changes in the rules that would allow for most products to be shipped as soon as the application is received at FCC.[2] Today, manufacturers already perform all required measurements to ensure that products meet the Commission's rules prior to filing equipment approval applications. For most transmitters, the measurement data are submitted with the application and for those receivers and transmitters subject to notification, the data are merely maintained by the applicant. Under notification, the "technical review" consists of an examination of the exterior of the device, the label, emission designation, frequency tolerance and power ratings. The label requirements are clearly set forth in the rules as are the other items that must be listed, except for certain emissions designators. The risk that this limited review might yield a problem would seldom, if ever, outweigh the costs of 40 to 50 days of added delay in a three

---

[2] Motorola recognizes that certain of the devices used in safety services (e.g. epirbs and elts) may require scrutiny by the Commission staff before shipment is permitted.

to four month product development cycle. The fact that more and more mobile transmitters are under the control of sophisticated system licensees underscores the diminished risk.[3]

There are also a number of steps that could be taken to facilitate a 5 to 10 day turnaround on grants. For example, the current system adds up to ten days to the published cycle times as a result of applications being filed at the Mellon Bank in Pittsburgh, forwarded to the Commission in Washington, and then on to the FCC Laboratory in Columbia, Maryland, for processing. Motorola encourages the Commission to adopt payment options that eliminate the current delay caused by the process of shipping voluminous applications first to Pittsburgh, then to Washington, and then to Columbia. Instead, the Commission should fully implement credit card payment of fees by which the applications could be filed directly with the laboratory in Columbia with credit card processing through the Mellon Bank via electronic link. While Motorola doubts any applicant would prefer checks over credit card payments, a check could be submitted to the Mellon Bank, along with a copy of the first page of the Form 731 with the original complete application being sent directly to the laboratory in Columbia. Electronic communications could then be used to have the bank communicate directly to the processing database the receipt and amount of the fee.

There would be little risk in beginning to process the application before receipt of confirmation of fee payment so long as the fee is confirmed before the grant is issued. If need be, the applicant's FCC ID number and fee code could be entered on the form via bar

---

[3] Similarly, Motorola encourages the Commission to move forward to eliminate the certification requirements for digital devices.

code or other machine readable format so as to facilitate accurate and efficient entry into the databases employed for payment recordation.

Electronic filing could also reduce the time needed to process equipment authorization applications. Motorola recognizes that most equipment applications now contain far more visual information than do most other applications processed by the Commission. At the same time, applicants are increasingly using computer generated forms and word processing to prepare the applications. Many applicants use digital cameras to create the photographs submitted in applications. As digital technology has become more prevalent in the preparation of applications, the time in now nigh for it to be employed in the submittal of applications. At a minimum, the Commission should issue rules proposing to accept first on disk, and later electronically, certain standard formats of text and graphics. During the transition to electronic filing, paper filing should remain an option.

Motorola also recognizes that the Commission does not currently have authority to divert a small portion of auction revenues to implement efficiency improvements such as electronic filing. At the same time, Motorola notes that $500,000 for use in implementing electronic filing would represent only three one-hundredths of one percent of the auction revenues generated thus far. The Commission and its various constituencies should send the message to Congress that such improvements would yield far more in direct and indirect benefits. The Commission staff would obtain better tools, manufacturers would meet competitive pressures more efficiently, and the public would receive access to improved technology more rapidly.

The requirement to specify emission designators is one area in which the requirements

could be streamlined with little risk of affecting the underlying rationale for equipment authorizations. Currently, the service rules specify an emission mask that defines the amount of energy permitted to fall outside of an assigned channel or spectrum block. The type acceptance process, however, requires that manufacturers specify a detailed emissions designator for each form of proposed operation. The designation nomenclature scheme, however, requires the designer to guess at modes of operation and at the likely characterization of these modes by the station licensing bureau in order to complete the emissions designator. As a result, equipment that clearly meets the emissions mask may not, in fact, be authorized with the designator that is later determined to be appropriate for a particular mode. This can result in the need to resubmit yet another application for the same equipment, with no change in the design of the equipment, but with another emissions designator shown in the application.

A far more efficient alternative would be to eliminate specification of the emission designator altogether and focus instead on containing the bandwidth within the mask. If necessary, the FCC could tie a generic emissions designator to those rule sections that specify the mask. The following table illustrates the concept:

Emissions Mask	Generic Emissions Designator
90.210(b)	20K0
90.210(c)	17K4
90.210(d)	11K2
90.210(e)	6K00
90.210(f)	4K00
90.210(g)	20K0, or 17K4
90.210(h)	12K3
90.210(I)	13K6
90.210(j)	11K9
90.691(a)	25K0

Currently, type acceptance applicants are required to submit a users manual. This often results in the filing of a voluminous marked-up draft as manuals are frequently finalized near the end of the product development cycle. Instead of requiring the submittal of the manual, the requirements should call for inclusion in the application of a one page statement summarizing the type of use to which the equipment would be put, the text of any required "information to user" statements called forth in the rules, and a summary of any user operated controls to change frequency or power.

Finally, Motorola must emphasize the necessity of maintaining the option for manufacturers to perform their own product testing. Given the emphasis on cycle time, performing one's own tests eliminates queues found at outside labs and allows much faster product modification and retesting if necessary to meet Commission rules.

IV. CONCLUSION

The changes recommended in these comments are modest, yet they illustrate the application of the sort of critical process review that is needed if the Commission is to meet its statutory mandates efficiently in an era of diminished public funding and rapidly expedited product life introductions. Motorola appreciates the opportunity to participate in this inquiry

and urges the Commission to move forward promptly to implement changes in the equipment authorization process.

Respectfully submitted

Motorola, Inc.

Stuart E. Overby/DEG

Stuart E. Overby
Assistant Director for Spectrum Planning
1350 I Street, NW, Suite 400
Washington, DC 20005

David E. Hilliard

David E. Hilliard
of
WILEY, REIN & FIELDING
1776 K Street, N.W.
Washington, D.C. 20006
(202) 429-7000
Its Attorneys

March 15, 1996